

## WHAT IS CLAIMED IS:

1. A 3-dimension scanning system, for scanning an input image, which comprises:

an input unit, for getting a 3-dimension picture data according to the input image;  
a process unit, coupled to said input unit, for storing and integrating said 3-dimension picture data, and translating said 3-dimension picture data into a 3-dimension motion control signal to output after processing ; and  
an output unit, coupled to said process unit, for receiving said 3-dimension motion control signal and outputting at least one Laser pulse to an object according to said 3-dimension motion control signal.

2. A 3-dimension scanning system as claimed in claim 1, wherein said input unit further comprises:

a VGA projector, for outputting an optical grating to an object waiting for scanning; and  
at least one digital camera, positioned at both sides of said VGA projector, for getting a 2-dimension image data from said object waiting for scanning according to said optical grating.

3. A 3-dimension scanning system as claimed in claim 1, wherein said process unit further comprises:

a personal computer, having a picture database, a gray level application program and a multiple pictures integrating program;  
an image capture interface, coupled to said digital camera, for getting said 2-dimension image data;  
a picture decode interface, coupled to said VGA projector, for decoding said 2-dimension image data and then getting said 3-dimension picture data, and outputting to said picture database for storing; and  
a 3-dimension motion control interface, for outputting said 3-dimension motion

control signal to said output unit according to said 3-dimension picture data.

4. A 3-dimension scanning system as claimed in claim 1, wherein said output unit further comprises:

a laser pulse control apparatus, coupled to said 3-dimension motion control interface, having a Laser beam output program to output said Laser pulse according to said 3-dimension motion control signal;

a 3-dimension motion control platform, coupled to said Laser pulse control apparatus, for outputting said Laser pulse to said object.

5. A 3-dimension scanning system as claimed in claim 4, wherein said object preferably is made of transparent matter such as glass, crystal or acrylic plastic.

6. A method for scanning a 3-dimension object, for scanning an input image of an object and translating it into a 3-dimension picture data then outputting at least one laser pulse to an object, which comprises the following steps:

(a) using an input unit, for getting a 3-dimension picture data of an enlarged capture surface of said object;

(b) inputting said 3-dimension picture data to a process unit, and using a gray level application program of said process unit to determine a point coordinate of said 3-dimension picture data; and

(c) establishing a 3-dimension error diffusion distributed table to execute point cloud.

7. A method for scanning a 3-dimension object; wherein said input unit of step (a) further comprises:

a VGA projector, for outputting an optical grating to an object waiting for scanning; and

at least one digital camera, positioned at both sides of said VGA projector, for getting a 2-dimension image data from said object waiting for scanning according to

said optical grating.

8.A method for scanning a 3-dimension object as claimed in claim 6, wherein said process unit of step (b) further comprises:

a personal computer, having a picture database, a gray level application program and a multiple pictures integrating program;

an image capture interface, coupled to said digital camera, for getting said 2-dimension image data;

a picture decode interface, coupled to said VGA projector, for decoding said 2-dimension image data and then getting said 3-dimension picture data, and outputting to said picture database for storing; and

a 3-dimension motion control interface, for outputting said 3-dimension motion control signal to said output unit according to said 3-dimension picture data.